

John Ondusinski

HP  
Lorna / Jim



# information on courses & workshops 1985/86

training &  
certification

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1985  
MOE



Ministry  
of the  
Environment

The Honourable  
Morley Kells  
Minister

Dr. Allan E. Dyer  
Deputy Minister

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of the  
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Ministère  
de  
l'Environnement

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Bureau 100  
Toronto (Ontario)  
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April 15, 1985

memorandum:

To: Branch/Regional Directors,  
Branch/Regional Managers/Supervisors,  
District Officers.

From: R.R. Doddridge, P. Eng.,  
Mgr., Training & Certification Section,  
Human Resources & Personnel Development Branch.

Re: **INFORMATION ON COURSES AND WORKSHOPS  
1985/86**

Herewith a copy of our publication on Courses and Workshops scheduled for the 1985/86 training season. Additional copies are available on request.

Please note the Registration procedures on pages 5 and 6. Ministry applications must be submitted on MOE Form 0144 (3/85), a sample of which is attached. So that registration fees can be recovered by journal entry, the appropriate budget codes must be included.

Included is a brief outline of staff development programs to be offered by Human Resources and Personnel Development Branch during the 1985/86 period. Dates and locations in some cases are still to be decided. For further information, please contact the Co-ordinator Staff Development, Human Resources & Personnel Development Branch.

HAZARDOUS CONTAMINANTS  
AND STANDARDS BRANCH  
135 ST. CLAIR AVENUE WEST  
TORONTO, ONTARIO M4V 1P5

  
.....  
R.R. Doddridge





Ministry  
of the  
Environment

REQUEST FOR TECHNICAL TRAINING  
COURSE/WORKSHOP/SEMINAR  
TRAINING & CERTIFICATION SECTION

1. EMPLOYEE DATA

SURNAME & INITIALS	USUALLY CALLED
POSITION TITLE	SIN #
BRANCH/REGION/OFFICE/BOARD/COMMITTEE	
WORK MAILING ADDRESS	WORK PHONE NUMBER
HOME ADDRESS	HOME PHONE NUMBER

2. COURSE/WORKSHOP/SEMINAR

TITLE	FROM	TO
SUITABLE ALTERNATE IF AVAILABE	FROM	TO

3. SIGNATURES AND CODES

AUTHORIZED BY	POSITION TITLE	DATE	BUDGET CODE/COMMON OBJECT
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FOR USE BY TRAINING & CERTIFICATION SECTION

Received	<u>YR</u> <u>MO</u> <u>D</u>	Accepted <input type="checkbox"/>	<u>COURSE</u>	<u>DATE</u>	Not Accepted <input type="checkbox"/>
Acknowledged	<u>YR</u> <u>MO</u> <u>D</u>	Info Entered	<u>YR</u> <u>MO</u> <u>D</u>	SIGNATURE	

FOR USE BY ACCOUNTS BRANCH

Date Received                      Journal Entry ☐

ORIGINAL To Training & Certification Section  
COPY Originator

HUMAN RESOURCES AND  
PERSONNEL DEVELOPMENT BRANCH  
Management Training Program for 1985/86

**Management Skills Workshop**

The content of the course includes work groups, leadership style, motivation, problem solving, time management, collective bargaining and grievance procedures, media relations, and other items which are determined by identifying the participants' specific needs. Participants examine their own management styles and attitudes and increase their awareness of some concepts of management.

The content of this course can be related to people who supervise, or those who have no subordinates but must interact with others from different parts of the organization, or for anyone within the organization who will benefit from the development of some basic management skills.

**Location and Dates:**

Dates to be determined, Location Nottawasaga Inn,  
Alliston, Ontario.

**Selection Process Workshop**

This course is designed to increase the participant's knowledge of the steps involved in the selection process; to develop their skill in making an effective selection decision; and to provide training on how to conduct an effective selection interview.

**Content:**

- Development of Selection Criteria
- Writing the Job Advertisements
- Screening the Applications
- Developing Effective Questions
- Rating and Ranking Candidates
- Rules and Responsibilities of Selection Boards
- Role Plays of Selection Interviews Using Video Feedback

**Who should attend:**

The managers who are presently or who will be involved in the selection of staff.

The definite dates and locations of this workshop have not been identified. However, this workshop will be done on a Regional basis as well as at the Brampton Training Centre.

#### **Additional Workshops**

**Regional/Branch Directors will be advised of any additional courses.**

## **POSITION SPECIFICATION WRITING WORKSHOP**

### **CONTENT:**

Writing Position Specifications  
(The What, How and Why)

This is a one day workshop for Management Supervisory staff and concentrates on how to write position specifications.

## **CLASSIFICATION GRIEVANCE WORKSHOP**

### **CONTENT:**

The classification grievance process

- . causes
- . prevention
- . procedures

This is a one and a half day workshop for Management Supervisory staff and concentrates on employee classification grievance handling.

- These workshops are designed to accommodate up to 12 participants.
- Workshops can be presented in Regional locations or individual nominees may attend the Central Workshop at the Staff Training Centre in Brampton as announced.

### **Training Philosophy:**

1. In general, programs employ the Behavioural Objectives Approach to Training (BOAT). A training manual, prepared for each course or workshop, as a reference text, provides information on the topics and lists objectives which tell the trainee what he must know and do to successfully complete the course. At the same time it reminds the instructor what he must teach, describe or demonstrate so that the performance of the trainee meets the required standards. To verify successful completion, both practical (hands-on) and written tests are administered to the trainees.
  
2. Instructors are obtained from many sources and have usually been involved in developing material for the courses and workshops. As part of their normal work they are usually also responsible for providing advice, guidance and practical assistance to the operational staff, so they understand the day-to-day problems faced in the field. Based on this knowledge and background, the instructor can deal with any relevant questions raised during the course or workshop. Furthermore, he is identified to the trainee as a point of contact for advice on problems which might arise.



### **Scope of Program:**

3. A program of courses, workshops and seminars is offered, annually, between September and May. Depending on commitments, the Training and Certification Section, if requested, will also visit a particular locality at a mutually agreed time and conduct certain of its programs or a one or two day mini-course on specific topics such as Preventive Maintenance, Pump Operations and Gas Chlorination. If a Municipality, Ministry Region or other organization wishes to conduct a program locally, the Section is prepared to advise and assist.
4. Training programs offered by this Ministry and described in the attached Appendices are listed below:

### **Appendix:**

1. Basic Sewage Treatment Operation
2. Activated Sludge Workshop
3. Sludge Digestion and Handling
4. Basic Water Treatment Operation Course
5. Surface Water Treatment Workshop
6. Basic Gas Chlorination Workshop
7. Preventive Maintenance
8. Digester Gas System Maintenance Workshop
9. Op/Maintenance of Water Distribution Systems
10. Op/Maintenance of Wastewater Collection Systems

11. Laboratory Skills for Plant Operators
  12. Advanced Water and Wastewater Treatment
  13. Instrumentation & Control
  14. Water Supply System Operations
  15. Confined Space Entry
  16. Op/Maintenance of Wastewater Pump Stations,  
(formerly Op/Mtce of Wastewater Lift Stations)
  17. Sewer and Watermain Design Course
  18. MEA/MOE Inspectors Course - Construction of Sewers  
& Watermain
  19. MEA/MOE Inspectors course - Construction of  
Sewage and Water Treatment Facilities
  20. Visible Emissions Identification Certificate Course
  21. Control of Liquid Industrial Waste
  22. Environmental Investigations
  23. Environmental Noise -I, II, III and IV,
  24. Environmental Noise in Land Use Planning
5. (a) The program schedule is at Appendix 25 and a course  
calendar is at Appendix 26.
- (b) New training programs are being developed in  
the areas of Solid/Hazardous Waste and Industrial  
Abatement. Course descriptions and schedules  
will be notified later.

**Prerequisites:**

6. (a) Prerequisites are specified for some courses.
- Employers must ensure that course candidates meet these requirements. If an application is received for a candidate lacking the course prerequisites, it will not be accepted.
- (b) Certain advanced courses require the Ministry Basic Water or Sewage Course or equivalent as a prerequisite. Equivalents to the Ministry Basic Courses include the courses previously offered by the OWRC;
- (c) Certain courses, because of prerequisites and/or course design, are restricted to specific groups

**Course Capacity:**

7. The capacity of each course, workshop and seminar is shown on Appendix 25 Program Schedule.

**Application Procedures:**

8. Those attending Ministry technical training courses fall into two classifications:-
- (a) Ontario Government employees
- (b) Staff other than a) above

Applications for Ministry of the Environment employees will be submitted on the MOE form (0144 (3/85) Application for Technical Training Courses/Workshops/Seminars.

Employees of organizations of the Provincial Government other than the Ministry of the Environment will submit a letter, requesting registration and include budget codes for journal entries. All other applications will include the registration fees payable, by cheque/money order, to the Treasurer of Ontario.

No verbal applications will be accepted.

9. The following information will be included in letters of application for non-Ministry personnel:-
  - (a) Course and date. An acceptable alternate, if available, should be shown.
  - (b) Full name of applicant and home address.
  - (c) Job title, address of employment and department or office.
10. An application should be forwarded to the Registration Secretary at the address shown in the Preface desirably no later than two months prior to the date of the course.

11. If a course is over-subscribed, selection of candidates will be based on date of receipt of application. As soon as possible after its receipt, the individual's employer will be notified if the application is accepted. If the course of first choice is over subscribed and an alternate has been shown on the application, the nominee will be listed for the alternative course (if space is available), subject to confirmation by the employer.

**Registration Fee:**

12. The required registration fee for each course is stated in the appropriate appendix. **Registration fees must accompany the applications from all those other than Province of Ontario Government Employees,** and
- (a) for all courses except MEA/MOE co-sponsored courses (Appendices 17, 18 and 19), the cheque or money order must be made payable to The Treasurer of Ontario.
  - (b) for MEA/MOE co-sponsored courses (Appendices 17, 18 and 19), the cheque or money order must be made payable to Municipal Engineers Association of Ontario.

(c) fees are refundable only if a cancellation is notified at least one month prior to the course.

(d) requests for transfers will only be accepted if notified fifteen days prior to the course.

**Pre-Course Study:**

13. Prior to a course, an information package will be forwarded to each applicant. This will include general course information, a sketch map showing course location and, in most cases, reference material for pre-course study. It is essential that employers encourage applicants to review the material provided for study purposes. For certain courses, the applicant will be required to submit solutions to problems forwarded with study material.

**Course Completion:**

14. The appropriate appendix shows the minimum average to be attained for successful completion of the course. A candidate's results and certificate will be forwarded to his employer, who is responsible for informing the individual.

15. As do many other organizations, such as the WPCF, AWWA and APWA, Environment Ontario now awards Continuing Education Units (CEUs) to participants who successfully complete certain courses or workshops. A permanent record of CEUs awarded to individuals will be maintained by the Training and Certification Section. A participant may request this record to use, if necessary, to meet requirements for.

- (a) Documentation of continuing qualifications for certification of operational staff of a water or wastewater utility;
- (b) Evidence of personal and vocational growth and adjustment to meet changing career demands;
- (c) Demonstration of a conscious effort towards personal development.

CEUs are awarded on the basis that one (1) CEU is equal to ten contact hours of formal instruction in job related training. Thus, for example, 3.0 CEUs will be awarded for successful completion of the Activated Sludge Process Workshop, since it involves 30 hours of formal instruction. The assigned value is shown on the appropriate appendix in this publication.

**Training Facilities:**

16. (a) These are located at the Ontario Experimental and Training Facility (OEF), Brampton and the Ministry Laboratory, Resources Road. The sketch map at Appendix 27 shows these locations.
- (b) Training conducted outside of Toronto will be held in suitable accommodation obtained specifically for the session.
- (c) Course locations are shown at Appendix 25.

**Transportation and Accommodation:**

17. These arrangements, including reservations, are the responsibility of the trainee. The sketch map indicates the motel/hotel area which is within reasonable proximity to the training facilities. A list of hotels with approximate room costs is at Appendix 28.
18. Employers must ensure that trainees on arrival at the training location are in possession of sufficient funds to meet anticipated expenses.



## Training Manuals:

19. Training manuals published by the Ministry of Environment are available for purchase from:

Publications Services  
Ministry of Government Services  
880 Bay Street, (5th Floor)  
Toronto, Ontario M7A 1N8

These include:

Basic Sewage Treatment Operation	\$ 6.50
Activated Sludge Process	7.00
Primary Treatment and Sludge digestion	2.00
Basic Water Treatment Operation	7.50
Surface Water Treatment Operation	7.00
Basic Gas Chlorination	6.00
Pump Operation	5.00
Preventive Maintenance	7.50
Digester Gas System Maintenance	2.00
Water Distribution System OP/MTCE.	7.50
Control of Industrial Waste in Mun.	3.00
Mathematics for Water & Wastewater Operations	4.00
Confined Space Entry	5.00

20. Manuals published by The Ontario Municipal Engineers Association include:

Sewer & Watermain Design Manual	\$ 15.00
Sewer & Watermain Construction Inspectors Manuals I and II	\$ 5.00 ea.

These are available for purchase by writing to:

Mr. B.B. Strachan, P. Eng.  
MEA Treasurer & Publications Secretary  
P.O. Box 37  
Perth, Ontario K7H 3E2

21. Prices are subject to change without notice.

## **Course Description**

### **Basic Sewage Treatment Operation Course**

#### **Purpose:**

The Basic Sewage Treatment Operation Course is designed primarily for operators in training and to increase on-the-job efficiency of wastewater treatment plant operators. The program stresses "the need to know" of all processes associated with wastewater treatment. This course is a prerequisite to the Activated Sludge Workshop and the Sludge Digestion and Handling Workshop. CEU Value 3.0

#### **Scope:**

The course covers the following topics:

- A. SEWAGE CHARACTERISTICS
- B. BACTERIOLOGY OF SEWAGE
- C. PRIMARY TREATMENT
- D. THE ACTIVATED SLUDGE PROCESS
- E. DIGESTION OF SLUDGE
- F. SLUDGE HANDLING
- G. INDUSTRIAL WASTE
- H. CHLORINATION OF SEWAGE

- I. BASIC LABORATORY TESTS
- J. SAMPLING AND RECORD KEEPING
- K. SAFETY

**Pre-Course Familiarization:**

Pre-course study material will be provided. When preparing to attend this course, an applicant must:

- (a) Review the Ministry manual, Basic Sewage Treatment Operation;
- (b) Complete the exercise in the Ministry manual, Mathematics for Water and Sewage Operators.

**Prerequisites:**

- (a) Employment and desirably 6 months experience in the operation of a wastewater treatment plant;
- (b) Desirably Grade XII academic standing.

**Passing Grade:**

70 per cent

**Registration Fee:**

\$40.00

## **Course Description**

### **Activated Sludge Workshop**

#### **Purpose:**

This workshop emphasizes process control and troubleshooting. It is specifically directed at an operator employed as, or likely to be promoted to, shift foreman, operator-in-charge or chief operator of an activated sludge plant. CEU Value 3.0

#### **Scope:**

The workshop which includes considerable "hands-on" participation covers the following:

- A. ACTIVATED SLUDGE OPERATING PRINCIPLES
- B. FACTORS AFFECTING THE PROCESS
- C. SAMPLING AND FLOW MEASUREMENT
- D. IDENTIFICATION AND SOLUTION OF OPERATING PROBLEMS
- E. PHOSPHORUS REMOVAL
- F. MICROSCOPIC EXAMINATION
- G. LABORATORY TESTS INCLUDING DO, pH, BOD , PHOSPHORUS DETERMINATION.

**Pre-Course Familiarization:**

Pre-course study material will be provided. When preparing to attend this workshop an applicant must:

- (a) Review the Ministry manual, Activated Sludge Process;
- (b) Complete the exercises in the Ministry manual, Mathematics for Water and Sewage Operators.

**Prerequisites:**

Successful completion of the Ministry of the Environment Basic Sewage Treatment Operation Course; or equivalent.

**Passing Grade:**

70 per cent

**Registration Fee:**

\$40.00

**Course Description**

**Sludge Digestion and Handling Workshop**

**Purpose:**

The Sludge Digestion and Handling Workshop emphasizes process control and troubleshooting. It is specifically directed at an operator employed as, or likely to be promoted to, shift foreman, operator-in-charge or chief operator of a primary treatment plant. CEU Value 3.0.

**Scope:**

The workshop which includes "hands-on" participation covers the following topics:

- A. RAW SEWAGE CHARACTERISTICS
- B. EQUIPMENT MAINTENANCE
- C. PRIMARY SEDIMENTATION
- D. ANAEROBIC AND AEROBIC DIGESTION - THEORY
  - OPERATION & CONTROL
  - PROBLEM SOLVING
- E. LABORATORY ANALYSES
- F. SLUDGE HANDLING & DISPOSAL
- G. GAS COLLECTION SYSTEMS.

**Pre-Course Familiarization:**

Pre-course study material will be provided. When preparing to attend this workshop, the applicant must:

- (a) Review the course training manual;
- (b) Complete the exercises in the Ministry manual Mathematics for Water and Sewage Operators.

**Prerequisites:**

Successful completion of the Ministry Basic Sewage Treatment Operation Course or equivalent.

**Passing Grade:**

70 per cent

**Registration Fee:**

\$40.00



## **Course Description**

### **Basic Water Treatment Operation Course**

#### **Purpose:**

The Basic Water Treatment Operation Course is designed primarily for operators in training and to increase on-the-job efficiency of water treatment plant operators. The program stresses "the need to know" rather than the "nice to know" of all processes associated with water treatment. This course is a prerequisite to the Surface Water Treatment Workshop. CEU Value 3.0.

#### **Scope:**

The course covers the following topics:

- A. WATER SOURCES
- B. WATER BACTERIOLOGY AND SAMPLING
- C. PHYSICAL AND CHEMICAL CHARACTERISTICS
- D. COAGULATION, FLOCCULATION & SEDIMENTATION
- E. WATER FILTRATION
- F. CHLORINATION
- G. SAFETY

- H. BASIC LABORATORY TESTS
- I. RECORDS
- J. CHEMICAL DOSAGE CALCULATIONS

**Pre-Course Familiarization:**

Pre-course study material will be provided. When preparing to attend this course, an applicant must:

- (a) Review the Ministry manual, Basic Water Treatment Operation;
- (b) Complete the exercises in the Ministry manual, Mathematics for Water and Sewage Operators.

**Prerequisites:**

- (a) Employment and desirably six months experience in the operation of water treatment plants;
- (b) Desirably Grade XII academic standing.

**Passing Grade:**

70 per cent

**Registration Fee:**

\$40.00

## **Course Description**

### **Surface Water Treatment Workshop**

#### **Purpose:**

The Surface Water Treatment Workshop is designed to increase the knowledge of experienced water treatment plant operators. It is specifically directed to an operator employed as, or likely to be promoted to, shift foreman, operator-in-charge or chief operator of a water treatment plant. CEU Value 3.0.

#### **Scope:**

The workshop which includes considerable "hands-on" participation covers the following topics:

- A. BASIC WATER CHEMISTRY
- B. MICROBIOLOGICAL CONSIDERATIONS
- C. WATER TREATMENT CHEMICALS
- D. COAGULATION
- E. FILTRATION
- F. TASTE & ODOUR CONTROL
- G. LABORATORY TESTS
- H. PROBLEM SOLVING

**Pre-Course Familiarization:**

Pre-course study material will be provided. When preparing to attend this workshop an applicant must:

- (a) Review the Ministry manual, Surface Water Treatment;
- (b) Complete the exercises in the Ministry manual, Mathematics for Water and Sewage Operators.

**Prerequisites:**

Successful completion of the Ministry of the Environment Basic Water Treatment Operation course; or equivalent.

**Passing Grade:**

70 per cent

**Registration Fee:**

\$40.00

## **Course Description**

### **Basic Gas Chlorination Workshop**

#### **Purpose:**

The Basic Gas Chlorination Workshop is designed to familiarize the new or inexperienced operator with the operation of various types of gas chlorination equipment, as well as to teach safety, maintenance and troubleshooting procedures. CEU Value 3.0.

#### **Scope:**

The workshop which includes considerable "hands-on" participation covers the following topics:

- A. CHLORINATION THEORY
- B. COMPONENTS OF A GAS CHLORINATION INSTALLATION
- C. CONTROL SYSTEMS
- D. STORAGE AND HANDLING OF CHLORINE GAS CYLINDERS
- E. SAFETY PRACTICES
- F. CHLORINATION EQUIPMENT & COMPONENTS
- G. START-UP & SHUT-DOWN PROCEDURES
- H. GENERAL MAINTENANCE
- I. TROUBLESHOOTING
- J. CHLORINATION LABORATORY TESTS

**Pre-Course Familiarization:**

Pre-course study material, including the Basic Gas Chlorination manual, will be provided.

**Prerequisites:**

Employment in a water or wastewater treatment plant or as an operator of gas chlorination equipment used in industry or recreational facilities.

**Passing Grade:**

70 per cent

**Registration Fee:**

\$40.00

## **Course Description**

### **Preventive Maintenance Workshop**

#### **Purpose:**

The Preventive Maintenance Workshop is designed to increase the knowledge and on-the-job efficiency of an operator who has some responsibility for maintaining water and wastewater plant equipment. It will teach the trainee good practices which are essential to achieve and sustain efficient operations. CEU Value 3.0.

#### **Scope:**

The workshop which includes "hands-on" participation covers the following topics:

- A. TOOLS AND WORKSHOP SET-UP
- B. UTILIZATION OF DRAWINGS AND EQUIPMENT MANUALS
- C. MAINTENANCE OF PIPING AND VALVES
- D. LUBRICATION
- E. BEARINGS, SEALS AND PACKING
- F. ALIGNMENT
- G. PUMP TROUBLESHOOTING
- H. MAINTENANCE OF PROCESS EQUIPMENT

**Pre-Course Familiarization:**

Pre-course study material, including the Preventive Maintenance Workshop manual, will be provided.

**Prerequisites:**

The candidate must be employed in water or wastewater treatment utility operations and/or maintenance.

**Passing Grade:**

70 per cent

**Registration Fee:**

\$40.00



## **Course Description**

### **Digester Gas Systems Maintenance Workshop**

#### **Purpose:**

As required by the Energy Act 1971 and related Regulations, the workshop is designed to upgrade the knowledge and skills of personnel who operate and maintain the gas system in a wastewater treatment plant. The individual may write the Ministry of Consumer and Commercial Relations (MCCR) examination for certification as a Maintenance Gas Fitter in addition to the workshop final examination. CEU Value 3.0.

#### **Scope:**

The workshop covers the following topics:

- A. DIGESTION PROCESS AND GAS PRODUCTION
- B. DIGESTER GAS SYSTEM COMPONENTS
- C. GAS PIPING
- D. FUELS AND COMBUSTION
- E. SAFETY
- F. FUELS SAFETY REGULATIONS & CODES

**Pre-Course Familiarization:**

When preparing to attend this workshop, an applicant should familiarize himself with digester operations, and review the Energy Act 1971, related Regulations and the Installation Codes for Natural Gas (CAN 1-B149.1-M80), Propane (CGA 149.2-1976) and Oil Burning Equipment (CSA Standard B139-71).

**Prerequisites:**

The applicant must be employed in the maintenance of the gas system in a wastewater treatment plant. Desirably he should have completed the MOE Sludge Digestion and Handling Workshop and have training in the procedures for safe entry into confined spaces.

**Passing Grade:**

- (a) 70 per cent
- (b) A passing grade of 75 per cent must be attained on the MCCR test for certification as a Maintenance Gas Fitter

**Registration Fee:**

\$40.00

plus

\$21.00 payable to "Treasurer of Ontario" if the individual elects to write the MCCR Certification examination.

## **Course Description**

### **Operation and Maintenance of Water Distribution Systems**

#### **Purpose:**

The course, Operation and Maintenance of Water Distribution Systems, is designed for new staff and to increase on-the-job efficiency of others. On completion of this course and the associated MOE workshops on pump operations and equipment maintenance, the individual will be capable of operating and maintaining water distribution systems, correcting malfunctions of equipment and performing quality control tests. CEU Value 3.0.

#### **Scope:**

The following topics will be dealt with:

- A. WATER SOURCES AND TREATMENT
- B. FACTORS IN PLANNING AND DESIGN
- C. WATER QUALITY OBJECTIVES
- D. WATERMAIN PIPES, JOINTS
- E. APPURTENANCES

- F. HYDRAULICS
- G. LEAK DETECTION, REPAIR, THAWING, RESTORATION
- H. CLEANING, FLUSHING, DISINFECTION, CROSS  
CONNECTIONS
- I. REPORTS AND RECORDS, PUBLIC RELATIONS
- J. SAFETY
- K. CORROSION

**Pre-Course Familiarization:**

The applicant must review pre-course study material including the Ministry manual, Operation and Maintenance of Water Distribution Systems.

**Prerequisites:**

- (a) Employed in operating and/or maintaining a water distribution system;
- (b) Desirably Grade XII academic standing.

**Passing Grade:**

70 per cent

**Registration Fee:**

\$40.00

**Course Description**

**Operation and Maintenance of Wastewater Collection Systems**

**Purpose:**

The Workshop, Operation and Maintenance of Wastewater Collection Systems, is designed for new staff and to increase on-the-job efficiency of others. On completion of this course and the associated MOE courses on pump operations and equipment maintenance the individual will understand the operation of a collection system and be capable of operating and maintaining the system and correcting malfunctions of equipment. CEU Value 3.0.

**Scope:**

The following topics will be dealt with:

- A. DESIGN PARAMETERS
- B. COMBINED/SANITARY SEWERS, APPURTENANCES
- C. LIFT STATIONS
- D. PLANNING FOR EMERGENCY SERVICES
- E. FLOW MEASUREMENT AND CONTROL

- F. INSPECTION AND TESTING
- G. CLEANING, MAINTENANCE AND REPAIR
- H. RECORDS AND ORGANIZATION
- I. SAFETY

**Pre-Course Familiarization:**

An applicant must review the reference notes on  
Operation and Maintenance of Wastewater Collection  
Systems.

**Prerequisites:**

- (a) Employment in the operation and/or maintenance  
of a wastewater collection system;
- (b) Desirably Grade XII academic standing.

**Passing Grade:**

70 per cent

**Registration Fee:**

\$40.00

## **Course Description**

### **Laboratory Skills for Plant Operators**

#### **Purpose:**

The workshop is designed to provide operators with the basic skills to carry out in-plant testing and analysis. The curriculum covers techniques, procedures and tests which provide information for day-to-day process control. A successful candidate will be capable of performing the laboratory tests in either a water or wastewater treatment environment.

CEU Value 3.0

#### **Scope:**

The following topics will be dealt with:

- A. SAMPLING TECHNIQUES FOR WATER AND WASTEWATER  
TREATMENT PROCESSES
- B. LABORATORY TECHNIQUES INCLUDING SAFETY
- C. OPERATION AND MAINTENANCE OF LABORATORY  
INSTRUMENTS
- D. LABORATORY TESTING USING:

- |                           |                        |
|---------------------------|------------------------|
| 1. Turbidimeters          | 6. Jar Testers         |
| 2. Spectrophotometers     | 7. Chromatographic     |
| 3. Colour Comparators     | 8. Distillation        |
| 4. Amperometric Titrators | Apparatus              |
| 5. Microscope             | 9. D.O. Meters         |
|                           | 10. pH Meters          |
|                           | 11. Analytical Balance |

**Pre-Course Familiarization:**

Pre-course study material will be provided. The applicant must ensure that he is knowledgeable in water and wastewater treatment processes.

**Prerequisites:**

- (a) Two or three years experience in plant operations;
  - (b) Successful completion of the Ministry of Environment Basic Sewage Treatment Operations Course and/or Basic Water Treatment Operations course;
  - (c) Desirably successful completion of the Ministry of Environment Activated Sludge Workshop and/or Primary Treatment and Digestion Workshop and/or Surface Water Treatment Workshop
- or
- acceptable equivalents.



**Passing Grade:**

70 per cent in written examination and demonstrated  
ability to carry out laboratory analyses.

**Registration Fee:**

\$40.00

## **Course Description**

### **Advanced Water/Wastewater Treatment**

#### **Purpose:**

This three day seminar is designed to upgrade the knowledge of chief operators and plant superintendents on water and wastewater advanced treatment methods.

The topics will vary from seminar to seminar covering tertiary treatment methods which have recently been introduced and those which are likely to be available in the near future. CEU Value 2.0.

#### **Scope:**

The scope of the seminar will vary. Topics such as those listed below will be selected:

##### **A. PHYSICAL/CHEMICAL TREATMENT METHODS**

- (1) Coagulation/Flocculation
- (2) Sedimentation
- (3) Filtration
- (4) Adsorption
- (5) Ion Exchange
- (6) Oxidation/Disinfection

- B. BIOLOGICAL TREATMENT METHODS
  - (1) Phosphorus Removal
  - (2) Nitrification/Denitrification
- C. SLUDGE TREATMENT AND DISPOSAL
  - (1) Thickening/Dewatering
  - (2) Incineration
  - (3) Sludge use in Agriculture
- D. SAMPLING TECHNIQUES
- E. ANALYSIS, INTERPRETATION AND REPORTING
- F. LEGAL RESPONSIBILITIES OF AN OPERATOR

**Pre-Course Familiarization:**

Pre-course study material will not be provided. Those planning to attend should review publications dealing with secondary and tertiary water and wastewater treatment.

**Prerequisites:**

Desirably:

- (a) Two to three years operational experience in a water and/or wastewater treatment plant, as a chief operator or superintendent;
- (b) Successful completion of the Ministry of the Environment Activated Sludge Process Workshop and/or Surface Water Treatment Workshop, or equivalent.

**Passing Grade:**

Not Applicable

**Registration Fee:**

\$40.00

## **Course Description**

### **Instrumentation and Control**

#### **Purpose:**

This course is designed to increase the knowledge of personnel involved in operation and/or maintenance of water supply and wastewater treatment facilities in the area of instrumentation and plant process control. It is an extension of training for operators of water and wastewater utilities.

CEU Value 3.0

#### **Scope:**

The course includes presentations and discussions of the following topics:

- A. INTRODUCTION TO PROCESS VARIABLES
- B. PROCESS CONTROL FEED BACK FACTORS AND MECHANISMS
- C. FLOW MEASUREMENT
- D. CHEMICAL FEED SYSTEMS AND ANALYTICAL TESTING
- E. WATER AND WASTEWATER TREATMENT PLANT INSTRUMENTATION
- F. PROCESS OPERATION BY COMPUTER

**Pre-Course Familiarization:**

Pre-course study material will be provided.

**Prerequisites:**

The applicant should have a good working knowledge of water and/or wastewater utility operation, and

(a) Two or three years experience in utility operations.

(b) Successful completion of Ministry of Environment course in

- Basic Sewage Treatment Operations, or  
Basic Water Treatment Operations
- Or Acceptable Equivalents.

**Passing Grade:**

70 per cent

**Registration Fee:**

\$40.00

**Course Description**

**Water Supply Systems Operator Workshop**

**Purpose:**

The Water Supply Systems Operator Workshop is designed to increase the knowledge and skills of inexperienced operators operating and maintaining small systems which employ minimum treatment.

CEU Value 3.0.

**Scope:**

The workshop will cover the following topics:

- A. WATER SOURCES
- B. WATER QUALITY CONSIDERATIONS AND  
TREATMENT
- C. PUMPING FACILITIES
- D. STORAGE FACILITIES
- E. DISTRIBUTION SYSTEMS
- F. DISINFECTION
- G. SAFETY
- H. SAMPLING AND TESTING

**Pre-Course Familiarization:**

Pre-course study material will be provided.

**Prerequisites:**

- (a) Six to twelve months experience in a  
water supply system
- (b) Desirably Grade XII Academic Standing.

**Passing Grade:**

70 per cent

**Registration Fee:**

\$40.00



## **Course Description**

### **Confined Space Entry Workshop**

#### **Purpose:**

This three and one-half day workshop is designed to familiarize employees of water and wastewater utilities with the requirements of the Occupational Health and Safety Act, 1978 and related Ontario Regulations 629 and 656. It will teach the student the safe practices and procedures for entry into confined space. The operation and maintenance of safety equipment is emphasized through demonstration and practice. CEU Value 2.0.

#### **Scope:**

The workshop includes presentations and "hands-on" practice of the following topics:

- A. SAFETY REQUIREMENTS INCLUDING A REVIEW  
OF THE OCCUPATIONAL HEALTH & SAFETY ACT,  
ASSOCIATED REGULATIONS AND MOE SAFETY POLICY
- B. HAZARDS
- C. SAFETY EQUIPMENT
- D. ENTRY PROCEDURES

**Pre-Course Familiarization:**

Pre-course study material will be provided. Those attending should carefully review the Act and Regulations.

**Prerequisites:**

Candidates for this course should have already received training in First Aid and CPR.

**Passing Grade:**

70 per cent in a written examination and demonstrated ability to safely enter a confined space.

**Registration Fee:**

\$40.00

**Course Description**

**Operation and Maintenance of Wastewater Pump Stations**

**Purpose:**

The workshop, Operation and Maintenance of Wastewater Pump Stations, is designed for entry level operations staff and to increase on-the-job efficiency of others. On completion of this workshop, and the associated courses on pump operations and preventive maintenance, the individual will be capable of operating and maintaining lift stations and related equipment. CEU Value 3.0.

**Scope:**

The following topics will be dealt with:

- A. SEWAGE CHARACTERISTICS
- B. WASTEWATER COLLECTION SYSTEMS
- C. SAFETY/WORKING IN CONFINED SPACES
- D. STATION CONTROL SYSTEMS
- E. PUMP AND MOTOR APPLICATIONS
- F. STANDBY POWER

- G. STATION START-UP AND SHUT-DOWN
- H. ROUTINE AND PREVENTIVE MAINTENANCE
- I. RECORDS AND INSPECTION
- J. STATION SECURITY

**Pre-Course Familiarization:**

An applicant must review pre-course study material including the Operation and Maintenance of Wastewater Pump Station Workshop manual.

**Prerequisites:**

- (a) Employed in the operation and/or maintenance of a wastewater lift station;
- (b) Desirably Grade XII academic standing

**Passing Grade:**

70 per cent

**Registration Fee:**

\$40.00

## **Course Description**

### **Sewer and Watermain Design Courses**

#### **Purpose:**

This course, developed and conducted jointly with the Ontario Municipal Engineers Association, is intended to broaden the understanding and knowledge of personnel who are engaged in the design of Sewer and Watermain Systems. Topics covered on the first half-day are common to both course segments, Sewer Design and Watermain Design. During the subsequent three and one-half days, each is held separately. The selection of the segment (sewer design or watermain design) should be clearly identified in the application. CEU Value 2.5.

#### **Scope:**

<u>Sewer Design</u>	<u>Watermain Design</u>
A. PROJECT PROCEDURES	A. PROJECT PROCEDURES
B. PHYSICAL LAYOUT OF SEWER & WATERMAIN SYSTEMS	B. PHYSICAL LAYOUT OF SEWER & WATERMAIN SYSTEMS
C. INTRODUCTION TO STORM WATER MANAGEMENT	C. WATERMAIN PIPE MATERIALS
	D. SOURCES OF WATER SUPPLY

D. SEWER PIPE MATERIALS	E. WATERMAIN INSULATION
E. HYDROLOGY IN URBAN AREAS	F. WATERMAIN APPURTENANCES AND TESTING
F. SEWER DESIGN GENERAL	G. WATER VALVES
G. SEWER DESIGN PROBLEM CALCULATIONS	H. HOW DESIGN AFFECTS MAINTENANCE
H. DESIGN CONSIDERATIONS WITH OTHER UTILITIES	I. DESIGN CONSIDERATIONS WITH OTHER UTILITIES
I. STRUCTURAL ASPECTS OF DESIGN	J. ESTIMATING WATER DEMAND
J. SEWER APPURTENANCES AND HOW DESIGN AFFECTS MAINTENANCE	K. BASIC HYDRAULICS
K. HYDRAULIC ASPECTS OF DESIGN	L. DESIGN PROBLEM CALCULATIONS
L. PROBLEM SOLVING OF JUNCTION MANHOLES	M. DESCRIPTION OF LOOP ANALYSIS
M. HYDROGRAPH TECHNIQUES	N. WATERMAIN CORROSION
N. MAJOR-MINOR CONCEPTS AND DESIGN	

**Pre-Course Familiarization:**

- (a) Review the lecture notes and other material mailed out for pre-course study;
- (b) Answer the pre-course study problems, which will be discussed during the course.

**Prerequisites:**

Candidates for this course should have some basic understanding of sewer and watermain design and should be employed, at least in part, in the design of Sewer and Watermain Systems.

**Registration Fee:**

For live-in students, the fee is \$385.00 (includes materials, meals and accommodation for four (4) days) at Nottawasaga Inn, Alliston, Ontario.

For commuters, the fee is \$210.00 which includes reference materials and lunch daily.

Registration fee must be made payable to MUNICIPAL ENGINEERS ASSOCIATION.

**Course Description**

**MEA/MOE Inspector's Course**

**Construction of Sewers and Watermains**

**Purpose:**

This course, developed and conducted jointly with the Ontario Municipal Engineers Association, is intended to broaden the understanding and knowledge of persons engaged in inspecting sewer and water-main construction projects. CEU Value 3.0.

**Scope:**

The course includes presentations on and discussions of the following topics:

- A. BASIC ELEMENTS OF CONTRACT DOCUMENTS
- B. ENVIRONMENTAL CONSIDERATIONS
- C. CONSTRUCTION LAYOUT
- D. TRAFFIC CONTROL
- E. SEWER INSTALLATION AND TESTING
- F. T.V. INSPECTION & INTERNAL GROUTING OF  
SEWER PIPE
- G. CONSTRUCTION SAFETY



- H. EXCAVATION AND BACKFILL
- I. DEWATERING METHODS
- J. PIPE MATERIAL AND INSTALLATION
- K. WATERMAIN INSTALLATION AND TESTING
- L. WATERMAIN CLEANING AND DISINFECTION
- M. BLASTING
- N. RESTORATION
- O. INSPECTOR'S DUTIES AND RECORDS

**Pre-Course Familiarization:**

Pre-course study material will be provided. Personnel attending this course should be familiar with the Regulations in their own area.

**Prerequisites:**

Those attending the course should be employed in the private or public sector where a significant portion of the job function is inspection of Sewers and Watermains construction projects.

**Passing Grade:**

60 per cent

**Registration Fee:**

\$40.00 payable to Municipal Engineers Association  
of Ontario

**Course Description**

**MEA/MOE Inspector's Course**

**Construction of Sewer & Water Treatment Facilities**

**Purpose:**

This course, developed and conducted jointly with the Ontario Municipal Engineers Association, is intended to broaden the understanding and knowledge of persons engaged in inspecting sewer and water treatment facility construction projects. CEU Value 2.5.

**Scope:**

The course includes presentations on and discussions of the following topics:

- A. TENDERING AND CONTRACT PROCEDURES
- B. BLASTING CONTROL
- C. SOILS IN CONSTRUCTION
- D. WATERMAIN DESIGN
- E. SEWER DESIGN
- F. CONSTRUCTION SAFETY
- G. PLANT LAYOUT

- H. REINFORCED CONCRETE PRACTICE
- I. PLANT EQUIPMENT
- J. TUNNELLING
- K. ROLE OF THE INSPECTOR & RECORDS

**Pre-Course Familiarization:**

Pre-course study material will be provided.  
Personnel attending this course should be familiar with the Regulations in their own area.

**Prerequisites:**

Those attending the course should be employed in the private or public sector where a significant portion of the job function is inspection of the construction of Sewage and Water facilities.

**Passing Grade:**

60 per cent

**Registration Fee:**

\$55.00 payable to **Municipal Engineers Association.**

## **Course Description**

### **Visible Emissions Identification Certificate Course**

#### **Purpose:**

The Visible Emissions Identification Certificate Course is designed to train and certify personnel as being proficient in the identification of the opacities of visible emissions. It will also help to prepare the provincial officer for appearance in court as an expert witness. The course is a combination of lecture and demonstration, with practice. Recertification is required every twelve months.

#### **Scope:**

The course covers the following topics:

- A. VISIBLE EMISSIONS - THEIR CAUSE AND REGULATION
- B. CLASSIFICATION AND IDENTIFICATION OF SOURCES
- C. PRINCIPLES OF COMBUSTION
- D. METEOROLOGICAL FACTORS IN READING VISIBLE EMISSIONS
- E. LEGAL ASPECTS AND COURTROOM APPEARANCES
- F. PRACTICE IN IDENTIFICATION OF OPACITIES OF VISIBLE EMISSIONS.

**Pre-Course Familiarization:**

When preparing to attend this course the applicant should read in advance the Visible Emissions Identification Manual, which will be sent out with pre-course material.

**Prerequisites:**

None

**Passing Grade:**

- (a) 70 per cent on a written exam and;
- (b) Identification of the opacity of a set number of consecutive visible emissions within the permitted deviation standards.

**Registration Fee:**

- (a) For the Certificate Course:
  - (1) Ontario Government and Municipal Employees \$40.00
  - (2) Others \$80.00
- (b) For Recertification
  - (1) Ontario Government and Municipal Employees \$10.00
  - (2) Others \$20.00

## **Course Description**

### **Control of Liquid Industrial Waste**

#### **Purpose:**

The five day course, Control of Liquid Industrial Waste, is designed for those responsible for the enforcement of a Liquid Industrial Waste By Law. It will provide knowledge of and solutions to problems which result from industrial waste discharges into a storm sewer, a wastewater collection system or a wastewater treatment plant. CEU Value 3.0.

#### **Scope:**

The following topics will be dealt with:

- A. CHARACTERISTICS, PROBLEMS AND GENERAL TREATMENT METHODS OF SELECTED LIQUID INDUSTRIAL WASTES
- B. FLOW MEASUREMENT AND SAMPLING
- C. SURVEYS AND INSPECTIONS
- D. EMERGENCY PLANS
- E. REGULATIONS FOR HAULAGE AND DISPOSAL
- F. SAFETY
- G. MUNICIPAL CONTROL PROGRAM

**Pre-Course Familiarization:**

Pre-course study material, including a manual, will be provided. When preparing to attend, an applicant should familiarize himself with all aspects of the responsibilities of his organization for the control of liquid industrial wastes.

**Prerequisites:**

Those attending should have a good knowledge of wastewater treatment operations and have some responsibility for the functions dealt with on the course.

**Passing Grade:**

60 per cent

**Registration Fee:**

\$40.00

## **Course Description**

### **Environmental Investigations**

#### **Purpose:**

The two week course is designed to upgrade the knowledge and skills of Provincial Officers who are responsible for carrying out investigations of incidents or alleged incidents of pollution of the environment. The course is held at the Ontario Police College (OPC) Aylmer, Ontario. Students will be provided with accommodation and meals. CEU VALUE 6.0.

#### **Scope:**

The following topics will be covered:

- A. INTRODUCTION TO LAW
- B. INVESTIGATIVE TECHNIQUES
- C. EVIDENCE, WITNESSMANSHIP, COURTROOM  
PROCEDURES
- D. SURVEILLANCE
- E. PROVINCIAL OFFENCES ACT
- F. MINISTRY LEGISLATION
- G. BASIC ACCOUNTING



**Pre-Course Familiarization:**

Pre-course study material will be provided. Those attending should carefully review the Acts and Regulations pertaining to environmental protection.

**Prerequisites:**

Attendance is restricted to Ministry staff.

**Passing Grade:**

Not applicable

**Registration Fee:**

There is no registration fee but costs billed by the OPC are recoverable. Charges including accommodation and meals are approximately \$500.00 per student for the two weeks.

**Course Description****Environmental Noise Certificate Course****Purpose:**

The Environmental Noise Certificate Course consists of four parts. It is designed to familiarize personnel with the techniques of practical acoustics required to fulfill the obligations of the municipal noise control officer or personnel of other noise control and abatement agencies. Upon successful completion of the appropriate parts of the course, the trainee will be qualified to perform noise control duties at the level indicated by the certificate rank awarded, as follows:

<u>Certificate</u>	<u>Course</u>
Class 1	Environmental Noise I and II
Class 2	Environmental Noise I, II and III
Class 3	Environmental Noise I, II, III and IV

The Ontario Association of Certified Engineering Technicians and Technologists (OACETT) has approved

the combined Courses I and II as a single credit course for OACETT certification purposes. Consideration of Courses III and IV as OACETT credit courses is pending. CEU Value each part 3.0.

**Scope:**

The courses cover the following topics:

**Environmental Noise I:**

Introductory Environmental Noise Theory; Handling of noise complaints; Use of simple sound level meter, octave band analyzer and calibration techniques; Measurement of traffic noise and industrial noise, Report procedures; Audiometry; Personal hearing test; Examination.

**Environmental Noise II:**

Review of Environmental Noise I; Theory; Noise complaint investigations; Municipal Noise By-Law; National and International Standards; Use of 1/3 octave analyzer; Tape recorder; Impulse sound level meter; Introduction to  $L_{eq}$ ; Field work; Examination.

**Environmental Noise III:**

Review of Environmental Noise II; Theory; Analytical Methods; Sound descriptors; Percentiles; Cumulative and statistical distribution; Vibration analysis; Stationary source noise analysis; Laboratory; Field work; Examination.

**Environmental Noise IV:**

Review of Environmental Noise III: Theory; Use of digital and microprocessor controlled monitors; Industrial noise measurement; Off-road and road-side vehicles pass-by noise measurements; Noise and vibration control techniques; MOE technical publications; Preparation and implementation of a noise by-law; Advanced procedures; Selection of instrumentation; Examination

**Pre-Course Familiarization:**

Pre-course study material, including a course manual, will be provided. When preparing to attend any part of this course, an applicant must complete the pre-course requirements.

**Prerequisites:**

Courses are to be taken in the order designated. Successful completion of a course of a lower rank is a prerequisite for progression to a higher level but, subject to Ministry approval, recognition will be given for prior formal training in acoustics subjects.

**Passing Grade:**

Candidates achieving a passing grade of 60 per cent will be awarded a certificate of competency in Environmental Noise in the rank achieved. Refresher courses should be taken at the achieved level or the next higher level, as appropriate.

**Registration Fee:**

The fee for each part of this four part course is:

- |     |  |          |
|-----|--|----------|
| (1) | Ontario Government and Municipal Employees | \$ 50.00 |
| (2) | All others                                 | \$150.00 |

## **Course Description**

### **Noise Control In Land Use Planning**

#### **Purpose:**

The Course on Noise Control in Land use Planning discusses the impact of noise on land use. It is designed for individuals responsible for the preparation, review and approval of new land use development including municipal and provincial planning and building department staff, urban planners, engineers, architects and developers. CEU Value 3.0.

#### **Scope:**

The course includes a review of relevant topics included in the Environmental Noise Certificate Courses I through III, and covers the following subjects:

- A. LAND USE PLANNING CONCEPTS AND PROCEDURES
- B. PLANNING PROCESS IN ONTARIO
- C. ANALYSIS OF COMMUNITY NOISE
- D. SOUND LEVEL LIMITS AND CRITERIA
- E. PREDICTION OF ROAD TRAFFIC AND TRAIN  
NOISE LEVELS

- F. AIRCRAFT NOISE CONTOURS; ANALYSIS OF NOISE  
CONTROL MEASURES
- G. PREDICTION OF SOUND BARRIER ATTENUATION
- H. BUILDING ACOUSTICS AND MATERIAL
- I. MEASUREMENT OF SOUND WITH SOUND LEVEL METERS
- J. CALCULATION WORKSHOP
- K. REPORT WRITING AND PROCEDURES

**Pre-Course Familiarization:**

Pre-course study material, including manuals will be provided. Candidates, who have not had suitable previous formal training are advised to review the relevant parts of Environmental Noise I, II and III.

**Passing Grade:**

Candidates achieving a passing grade of 60% will be awarded a Certificate denoting successful completion of the course.

**Registration Fee:**

The fee for this course is:

- |     |  |          |
|-----|--|----------|
| (1) | Ontario Government and Municipal employees | \$ 50.00 |
| (2) | All others                                 | \$150.00 |

# PROGRAM SCHEDULE 1985/86

PROGRAM	CAPACITY	DATES		LOCATION
Basic Sewage Treatment	25	Sept. 9 - 13	1985	Training Centre
		Nov. 25 - 29	1985	Training Centre
		Feb. 3 - 7	1986	Training Centre
		April 14 -18	1986	Training Centre
Activated Sludge Process	25	Oct.28 - Nov. 1	1985	Training Centre
		Feb. 17 - 21	1986	Training Centre
Sludge Digestion and Handling	25	Jan. 20 - 24	1986	Training Centre
Basic Water Treatment	25	Oct. 21 - 25	1985	Training Centre
		Dec. 16 - 20	1985	Training Centre
		Feb. 24 - 28	1986	Training Centre
		Jun 2 - 6	1986	Training Centre
Surface Water Treatment	25	Nov. 18 - 22	1985	Training Centre
		March 10 - 14	1986	Training Centre



# PROGRAM SCHEDULE 1985/86

PROGRAM	CAPACITY	DATES		LOCATION
Basic Gas Chlorination	25	Sept. 16 - 20	1985	Training Centre
		Nov. 18 - 22	1985	<b>Sudbury</b>
		Jan. 6 - 10	1986	Training Centre
		Apr. 7 - 11	1986	Training Centre
		May 26 - 30	1986	Training Centre
Preventive Maintenance	25	Oct. 7 - 11	1985	Training Centre
		Jan. 20 - 24	1986	Training Centre
Digester Gas Systems	25	Nov. 18 - 22	1985	Training Centre
Op/Mtce Wastewater Collection Systems	25	Mar. 3 - 7	1986	Training Centre
Op/Mtce Water Distribution Systems	25	Sept. 23 - 27	1985	Training Centre
Laboratory Skills for Plant Operators	15	Oct. 7 - 11	1985	Training Centre
		Jan. 27 - Feb. 1	1986	Training Centre
		May 12 - 16	1986	Training Centre

# PROGRAM SCHEDULE 1985/86

PROGRAM	CAPACITY	DATES		LOCATION
Advanced Water/Waste-water Treatment	35	Jan. 6 - 10	1986	MOE Laboratories
Instrumentation & Control	25	Nov. 4 - 8	1985	Training Centre
		Feb. 10 - 14	1986	Training Centre
		May 5 -9	1986	Training Centre
Water Supply System Operations	25	Dec. 9 - 13	1985	Training Centre
Confined Space Entry	25	Sept. 30 - Oct. 4	1985	Training Centre
		Jan. 13-17	1986	Training Centre
		Mar. 17 - 21	1986	Training Centre
O & M Wastewater Pump Stations	25	Apr. 28 - May 2	1986	Training Centre
Sewer & Watermain Design	60	Oct. 21 - 25	1985	Nottawasaga Inn (Registration Alliston, Ont. Oct. 20/85)
MEA/MOE Inspectors Course - Sewer and Watermain Construction	60	Dec. 2 - 6	1985	MOE Laboratories
MEA/MOE Inspectors Course - Facility Construction	60	Mar. 17 - 21	1986	MOE Laboratories

# PROGRAM SCHEDULE 1985/86

PROGRAM	CAPACITY	DATES		LOCATION
Industrial Abatement	25	To be Determined		MOE Laboratories
Visible Emissions		June 2 - 27	1986	Locations to be Determined
Control of Liquid Industrial Waste	40	Mar. 3 - 7	1986	MOE Laboratories
Waste Disposal by Landfilling	25	To be Determined		
Environmental Investigations	24	Apr. 28 - May 9	1986	Ontario Police College, Aylmer (MOE ONLY)
Environmental Noise I	25	Sept. 16 - 20	1985	MOE Laboratories
Environmental Noise II	25	Mar. 17 - 21	1986	MOE Laboratories
Environmental Noise III	25	May 26 - 30	1986	MOE Laboratories
Environmental Noise IV	25	Jan. 13 - 17	1986	MOE Laboratories
Environmental Noise in Land Use Planning	50	Nov. 18 - 22	1985	MOE Laboratories

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## APPENDIX 28

HOTEL	TELEPHONE	SINGLE	DOUBLE
BRISTOL PLACE 950 DIXON RD	675-9444	\$76.00	\$87.00
CAMBRIDGE HOTEL DIXON RD. HWY 401	249-7671	41.00	45.00
CARA INN 6257 AIRPORT RD.	678-1400	54.00	64.00
CONSTELLATION HOTEL 900 DIXON ROAD	675-1500	56.00	68.00
HERITAGE INN 385 REXDALE BLVD	742-5510	40.00	45.00
HOLIDAY-INN (Airport) 970 DIXON ROAD	675-7611	54.00	66.00
HOWARD JOHNSON'S (Airport Hotel) 801 DIXON ROAD	675-6100	53.00	53.00
RAMADA INN 544 DIXIE RD. (Mississauga)	624-1144	59.00	59.00
SKYLINE HOTEL 655 DIXON ROAD	244-1711	54.00	64.00
HOLIDAY-INN(Bramalea) 30 PEEL CENTRE DR	792-9900	54.00	62.00
RELAX INN 5599 AMBLER DR (Mississauga)	624-9500	33.25	33.25
JOURNEY'S END 1500 MATHESON BLVD (Mississauga)	624-6900	38.88	45.88

The above government rates were provided by the management of each hotel and are subject to change with time. When requesting reservations, the actual government rate should be confirmed.

To qualify for the above room rates, please inform the hotel registration clerk that you are attending a Ministry of the Environment course.

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